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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2176

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,568

Applicant(s)

CHEN ET AL.

Examiner

Amelia Rutledge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 16-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14, and 16-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Amendment, filed 05/22/2006.
2. Claims 1-4, 6-14, and 16-32 are pending in the case. Claims 1, 14, and 23 are independent claims.
3. Claims ^{1-4, 6-13}~~1-43~~ have been amended to overcome the claim rejections under 35 U.S.C. 112, second paragraph, therefore those rejections have been withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-3, 6-14, and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. (hereinafter "Price"), "Linking By Inking: Trailblazing in a Paper-like Hypertext", *HyperText* 98, Pittsburgh, PA, copyright ACM 1998, p. 30-39, in view of Grefenstette et al. (hereinafter "Grefenstette"), U.S. Patent No. 6,778,979 B2, issued August 2004.**

Regarding independent claim 1, Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a document the system performs queries and

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displays links to related pages (Fig. 3). The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations.

While Price does not explicitly teach that collecting the context data comprises deriving at least two search terms, comparing the search terms to a history of search terms, and weighting each of the search terms according to whether a particular search term is included in the history, a higher weight being assigned to a search term that is included in the history, Grefenstette teaches a method of automatically querying and extracting data from a document to search for related content (col. 3, l. 1-34).

Grefenstette teaches a method of assigning a personality to a document, where the personality contains document service requests such as automated searches based on entities, i.e., words, in the document (col. 10, l. 18-col. 11, l. 6). Grefenstette teaches extracting the entity words based on relevance and storing them in a database.

Grefenstette teaches several methods of deriving, comparing and weighting search terms based on inclusion in a history of search terms. Grefenstette teaches a method of determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14; col. 30, l. 61-col. 32, l. 4). Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and deriving search terms from a next accessed document, comparing the search

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terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l. 56).

Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 2, Price teaches extracting words from text proximal to the annotation (p. 34, Col. 1, par. 2-3).

Regarding dependent claim 3, while Price teaches a hypertext application, Price does not explicitly teach locating objects near to an annotation object in a document object model (DOM) associated with the annotation. However, Grefenstette teaches locating entity objects near to an entity object, in an associated DOM of a hypertext document (col. 10, l. 18-col. 11, l. 6). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both

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the writer and reader of documents, thus keeping the document up to data

(Grefenstette, col. 10, l. 18-32).

Claim 5 has been cancelled.

Regarding dependent claims 6-7, while Price teaches deriving search terms, Price does not explicitly teach comparing the search terms to a history of search terms; and weighting each of the search terms according to whether a particular search term is included in the history of search terms, a higher weight being assigned to a search term that is included in the history of search terms. However, Grefenstette teaches comparing a search term to a history of search terms used by a particular user or group of users since Grefenstette teaches that personalities for a document may contain a history of search terms and determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14). Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l. 56). Further, Grefenstette teaches that one or more personalities may be attached to a document (col. 10, l. 18-col. 11, l. 6). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user

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in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 8, Price teaches searching the electronic document for terms that match or are similar to the annotation (p. 35, "Ink Anchors").

Regarding dependent claim 9, while Price does not explicitly teach searching remote sites for documents containing terms that match or are similar to the annotation, Grefenstette teaches searching the web for documents containing terms similar to the annotation (col. 40, l. 1-32). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 10, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user.

Regarding dependent claim 11, while Price does not explicitly teach that the previous documents are limited to documents accessed within a specified time period, Grefenstette teaches limiting the previous documents to documents accessed within a specified time period (col. 36, l. 5-8). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 12, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user.

Regarding dependent claim 13, Price teaches that an annotation comprises a circled phrase (p. 34, par. 2).

Regarding independent claim 14, Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2,

par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3). The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations. Price teaches search and extraction modules (p. 35-36, "Implementation").

While Price does not explicitly teach that the history module includes one or more historical keywords that were previously used, and that the extraction module weights keywords according to whether or not the keywords are included in the history module, Grefenstette teaches a method of automatically querying and extracting data from a document to search for related content (col. 3, l. 1-34). Grefenstette teaches a method of assigning a personality to a document, where the personality contains document service requests such as automated searches based on entities, i.e., words, in the document (col. 10, l. 18-col. 11, l. 6). Grefenstette teaches extracting the entity words based on relevance and storing them in a database, i.e., history module. Grefenstette teaches several methods of deriving, comparing and weighting search terms based on inclusion in a history of search terms. Grefenstette teaches a method of determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14; col. 30, l. 61-col. 32, l. 4). Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and

deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l. 56).

Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Claim 15 has been cancelled.

Regarding dependent claim 19, Price teaches extracting keywords from text near to the annotation (p. 34, Col. 1, par. 2-3).

Regarding dependent claim 20, while Price does not explicitly teach that the related content located by the information processing module comprises documents on a network that contain one or more of the keywords, Grefenstette teaches searching the web for documents containing terms similar to the annotation (col. 40, l. 1-32). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would

anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 21, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user.

Regarding dependent claim 22, while Price does not explicitly teach a user interface configured to present keywords to the user and provide for selection of none or one or more of the keywords by the user, Grefenstette teaches displaying keywords to the user for selection in a list based on relevance (col. 35, l. 34-54). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding independent claim 23, Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an electronic document. Price teaches monitoring an electronic document for user annotations and recognizing entry of an annotation into the electronic document (p. 32, Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2,

par. 4) because as a reader annotates a document the system performs queries and displays links to related pages (Fig. 3). The queries locate documents related to the annotation using the annotation and context data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations. Price teaches that annotations that select a phrase result in weighted queries based on the entire surrounding sentence with the emphasis on the selected words (p. 34, Col. 1, par. 2), resulting in a query for a search with words indicated by the annotation and keywords derived from the context. While Price does not explicitly teach a keyword history list, Grefenstette teaches a method of automatically querying and extracting data from a document to search for related content (col. 3, l. 1-34). Grefenstette teaches a method of assigning a personality to a document, where the personality contains document service requests such as automated searches based on entities, i.e., words, in the document (col. 10, l. 18-col. 11, l. 6). Grefenstette teaches extracting the entity words based on relevance and storing them in a database, i.e., history. Grefenstette teaches several methods of deriving, comparing and weighting search terms based on inclusion in a history of search terms. Grefenstette teaches a method of determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14; col. 30, l. 61-col. 32, l. 4). Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and

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deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l. 56).

Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claim 24, Price teaches that an annotation comprises a circled phrase (p. 34, par. 2).

Regarding dependent claim 25, claim 25 is directed toward substantially similar subject matter as claimed in dependent claim 3, and is rejected along the same rationale.

Regarding dependent claim 26, Price teaches locating keywords on the target page, which may be a page of the document (p. 34, par. 1).

Regarding dependent claim 27, claim 27 is directed toward substantially similar subject matter as claimed in dependent claim 20, and is rejected along the same rationale.

Regarding dependent claim 28, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink

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anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7; Fig. 6). Price teaches determining keywords from annotations made by the user.

Regarding dependent claim 29, while Price does not explicitly teach deriving keywords from the context data by identifying words that frequently appear with the annotation in other documents accessed by the user, Grefenstette teaches displaying keywords to the user for selection in a list based on relevance (col. 35, l. 34-54). Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l. 56). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

Regarding dependent claims 30-32, while Price does not explicitly teach weighting and ranking the keywords, where the keywords were previously used by a user or group of users, Grefenstette teaches several methods of deriving, comparing and weighting search terms based on inclusion in a history of search terms.

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Grefenstette teaches a method of determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14; col. 30, l. 61-col. 32, l. 4).

Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l.

56). Grefenstette teaches comparing a search term to a history of search terms used by a particular user or group of users since Grefenstette teaches that personalities for a document may contain a history of search terms and determining a list of interesting concepts to the user by using frequently followed links, or information from a user's interaction history from entity, i.e., word browsing patterns (col. 32, l. 59-col. 33, l. 14).

Grefenstette teaches an alternative embodiment with a method of creating a search history of derived search terms and deriving search terms from a next accessed document, comparing the search terms to the history of search terms, and weighting the terms for relevance based on whether the term is in the history (col. 35, l. 10-col. 36, l.

56). Further, Grefenstette teaches that one or more personalities may be attached to a document (col. 10, l. 18-col. 11, l. 6). Both Price and Grefenstette are directed toward the contextual annotation of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the annotation system of Price with the automatic document enrichment disclosed by Grefenstette, to produce a document which would assist a user in the acquisition, sharing, and utilization of knowledge and

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so that the document would anticipate the information needs of both the writer and reader of documents, thus keeping the document up to data (Grefenstette, col. 10, l. 18-32).

6. Claims 4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of Grefenstette as applied to claims 1-3, 6-14, and 19-32 above, and further in view of Haveliwala et al. (hereinafter "Haveliwala"), "Evaluating Strategies for Similarity Search on the Web", WWW2002, May 2002, p. 432-442.

Regarding dependent claim 4, while Price in view of Grefenstette teaches interpreting each annotation as a text selection transformed into a list of word weights, Price in view of Grefenstette does not explicitly teach defining a first and second distance from the annotation and weighting keywords accordingly. Haveliwala teaches defining a first and second distance from an anchor by setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1). Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the anchor (p. 437, Sect. 5.2, par. 1) with terms having a greater weight according to the distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches locating relevant documents related to the anchor utilizing the weighted keywords. Price, Grefenstette, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Grefenstette,

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because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the ranked entities of Grefenstette.

Regarding dependent claim 16, while Price in view of Grefenstette teaches interpreting each annotation as a text selection transformed into a list of word weights, Price in view of Grefenstette does not explicitly teach weighting each keyword according to a relative distance that the keyword is from the annotation. Haveliwala teaches defining a relative distance from an anchor by setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1). Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the anchor (p. 437, Sect. 5.2, par. 1) with terms having a greater weight according to the relative distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches locating relevant documents related to the anchor utilizing the weighted keywords. Price, Grefenstette, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Grefenstette, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the

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ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the ranked entities of Grefenstette.

Regarding dependent claims 17 and 18, while Price in view of Grefenstette does not explicitly teach that the results of the search are re-ranked according to the weighted keywords, Haveliwala teaches an algorithm to generate a document similarity index (p. 439, Sect. 6.2). Haveliwala teaches generating a query derived from the anchor and weighted keywords (p. 439, Fig. 11). It would have been obvious to one of ordinary skill in the art at the time of the invention that the document similarity index could be used to order or rank the search results according to the weighted keywords. Price, Grefenstette, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Grefenstette, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the ranked entities of Grefenstette.

Response to Arguments

7. Applicant's arguments with respect to claims 1-4, 6-14, and 16-32 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection includes the Grefenstette patent, which is being relied upon to teach the newly

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claimed limitations of independent claims 1, 14, and 23, which changed the scope of the claimed invention.

Applicant's arguments in regard to the proper combination of the Price and Haveliwala references (Remarks, p. 15-16) have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Price, Grefenstette, and Haveliwala are analogous art because all three are directed toward query and relevance searching of documents based on keywords. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price in view of Grefenstette, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4) and the ranked entities of Grefenstette.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amelia Rutledge whose telephone number is 571-272-7508. The examiner can normally be reached on Monday - Friday 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR

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